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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/955,308

09/19/2001

You Yoshioka

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10/04/2004

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EXAMINER

CHU, KIM KWOK

ART UNIT

PAPER NUMBER

2653

DATE MAILED: 10/04/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/955,308	Applicant(s) YOSHIOKA, YOU	
	Examiner Kim-Kwok CHU	Art Unit 2653	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1,2,5 and 6 is/are rejected.
- 7) ☒ Claim(s) 3,4,7 and 8 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 September 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|----------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>9/19/01&7/22/03</u> . | 6) <input type="checkbox"/> Other: ____. |

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. § 102 that form the basis for the rejections under this section made in this Office action:

*A person shall be entitled to a patent unless --
(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.*

2. Claims 1, 2 and 6 are rejected under 35 U.S.C. § 102(b) as being anticipated by Hofer (U.S. Patent 5,710,748).

Hofer teaches an optical-system driving apparatus having all the elements and means as recited in claims 1 and 2. For example, Hofer teaches the following:

(a) as in claim 1, a plurality of positioning means 150, 158 for positioning a spot of a light beam in an information recording position on an optical disk 112 (Fig. 1);

(b) as in claim 1, sensing means 114 for sensing the reflected light of the light beam projected onto the optical disk 112 (Fig. 1);

(c) as in claim 1, a plurality of driving signal generating means 172 for generating a plurality of driving signals to drive the plurality of positioning means 150, 158 respectively on the basis of the result of sensing the reflected light sensed by the sensing means 114 (Fig. 1);

(d) as in claim 1, converting means 130, 134, 136 for converting the plurality of driving signals generated by the plurality of driving signal generating means 172 into a multiple digital signal 184/186 for channels the number of which is smaller than the number of the positioning means (Fig. 1; converting means 134 multiplexes a driving signal generated from the summing circuit 130 into a multiple digital signal);

(e) as in claim 1, decoding means 138 for receiving the multiple digital signal converted by the converting means 130, 134, 136 and decoding into a plurality of signals 188, 194 (Fig. 1);

(f) as in claim 1, driving means 150, 158 for driving the plurality of positioning means independently on the basis of the plurality of signals decoded by the decoding means 138 (Fig. 1); and

(g) as in claim 2, the plurality of positioning means include at least two of a tilt actuator, a tracking actuator 158, a focus actuator 150, and an aberration correcting actuator (Fig. 1).

3. Method claim 6 is drawn to the method of using the corresponding apparatus claimed in claim 1. Therefore method claim 6 corresponds to apparatus claim 1 and is rejected for the same reasons of anticipation as used above.

4. Claim 5 is rejected under 35 U.S.C. § 102(b) as being anticipated by Hofer (U.S. Patent 5,710,748).

Hofer teaches a driving circuit having all the elements and means as recited in claim 5. For example, Hofer teaches the following:

(a) as in claim 5, the driving circuit applied to an optical disk apparatus which senses the reflected light of a light beam projected onto an optical disk 112 (Fig. 1);

(b) as in claim 5, the driving circuit generates a plurality of driving signals 190, 196 on the basis of the result of the sensing, drives a plurality of positioning means 150, 158 on the basis of the plurality of driving signals 190, 196, and thereby controls the positioning of a spot of the light beam in an information recording position on the optical disk 112 (Fig. 1);

(c) as in claim 5, the driving circuit comprising decoding means 138 for receiving and decoding a multiple digital signal 184/186 for channels the number of which is smaller than the number of the plurality of positioning means (Fig. 1); and

(d) as in claim 5, driving means 150, 158 for driving the plurality of positioning means on the basis of a plurality of signals decoded by the decoding means (Fig. 1).

Allowable Subject Matter

5. Claims 3, 4, 7 and 8 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

6. The following is an Examiner's statement of reasons for the indication of allowable subject matter:

As in claims 3 and 7, the prior art of record fails to teach or fairly suggest the following:

(a) the plurality of positioning means include a tracking actuator, a focus actuator, a tilt actuator, and an aberration correcting actuator, the driving signal generating means generates a tracking error signal for driving the tracking actuator, a focus error signal for driving the focus actuator, a tilt error signal for driving the actuator, and an aberration correcting signal for driving the aberration correcting actuator; and

(b) the converting means converts the tracking error signal, the focus error signal, the tilt error signal, and the aberration correcting signal into a serial multiple digital signal.

As in claims 4 and 8, the prior art of record fails to teach or fairly suggest the following:

(a) the plurality of positioning means include a tracking actuator, a focus actuator, a tilt actuator, and an aberration correcting actuator, the driving signal generating means generates a tracking error signal for driving the tracking actuator, a focus error signal for driving the focus actuator, a tilt error signal for driving the tilt actuator, and an aberration correcting signal for driving the aberration correcting actuator; and

(b) the converting means converts not only the tracking error signal, the focus error signal, and the tilt error signal but also the tracking error signal, the focus error signal, and the aberration correcting signal into a serial multiple digital signal.

The features indicated above, in combination with the other elements of the claims, are not anticipated by, nor made obvious over, the prior art of record.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Takeya et al. (U.S. Patent 5,065386) is pertinent because Takeya teaches a servo system having a multiplexer to combined the focusing error signal and tracking error signal.

8. Any response to this action should be mailed to:

Commissioner of Patents and Trademarks Washington, D.C.
20231 Or faxed to:

(703) 872-9306 (for formal communications intended for
entry. Or:

(703) 746-6909, (for informal or draft communications,
please label "PROPOSED" or "DRAFT")

Hand-delivered responses should be brought to Crystal Park
II, 2021 Crystal Drive, Arlington. VA., Sixth Floor
(Receptionist).

Any inquiry of a general nature or relating to the status
of this application should be directed to the Group
receptionist whose telephone number is (703) 305-4700.

Any inquiry concerning this communication or earlier
communications from the examiner should be directed to Kim CHU
whose telephone number is (703) 305-3032 between 9:30 am to
6:00 pm, Monday to Friday.

KE 9/28/04
Kim-Kwok CHU
Examiner AU2653
September 28, 2004

(703) 305-3032

William Korzuch
WILLIAM KORZUCH
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600